

**Work Order ID 43591**

June 26, 2009 10:39:30 AM



19/6/2009

Page 1

Item ID: D2091 BK

Accept



Setup Start



Revision ID: A

Stop



Item Name: Aspirator

Start Date: 15/07/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 03/08/2009 Req'd Qty: 20.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D2091

Rev A

100

0.00



Large Fab

Large Fab

Memo

0.00

Large Fab

Weld D2000-043 Jet to D2094 Aspirator Body as per Dwg D2091 using Jig DT8294



110

0.00



QC9- Inspect visual per QSI004- Fusion Welds

QC

Memo

0.00

Quality Control



120

0.00



Outsource process-Anodize per QSI017 4.1.10.1

Outsource4

Memo

0.00

Outsource process - Anodize

Issue P/O: \_\_\_\_\_ Black Anodize weldment from step 3 and Dwg D2095



# Work Order ID 43591

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Page 2

Item ID: D2091

Accept



Setup Start



Revision ID: A

Stop



Item Name: Aspirator

Start Date: 15/07/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 03/08/2009 Req'd Qty: 20.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

INSPECT ANODIZE

140

Large Fab

0.00



Large Fab

Memo

0.00

Large Fab

Install grommets as per Dwg D2091

m-h 09/07/07 (20x)

150

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

⇒ 809/07/02 (20) caute

# Work Order ID 43591

June 26, 2009 10:39:30 AM



Page 3

Item ID: D2091

Accept



Setup Start



Revision ID: A

Stop



Item Name: Aspirator

Start Date: 15/07/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 03/08/2009 Req'd Qty: 20.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160



Packaging

Identify as per dwg & Stock Location: 167

0.00

Memo

0.00

9/7/7 20x SQ

170



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

09/07/07 JF  
ME 09-07-07

# Picklist Print

June 26, 2009 10:39:29 AM

Page 1

Work Order ID: 43591

Parent Item: D2091RevA

Parent Item Name: Aspirator

Comments:



Start Date: 15/07/2009

Required Date: 03/08/2009

Start Qty: 20.00

Required Qty: 20.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
A1622 		Purchased	No			100	Each	0.0000	80.0000			
✓ Grommet D2000-043RevB 		Manufactured	No			100	Each	0.0000	20.0000			
✓ Jet D2094RevA 		Manufactured	No			100	Each	0.0000	20.0000			
✓ Aspirator A1449 		Purchased	No			140	Each	0.0000	80.0000			
✓ Grommet D2095RevA 		Manufactured	No			140	Each	0.0000	20.0000			
Aspirator												

M1487 m-l 09/07/07

M1487 m-l 09/07/07

Date: Thursday, 20/11/2008 3:33:07 PM  
 User: Julie Dawson

## Process Sheet

<b>Customer</b> : CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> : ASPIRATOR
<b>Job Number</b> : 43591	
<b>Estimate Number</b> : 11483	
<b>P.O. Number</b> :	<b>Part Number</b> : D2091
<b>This Issue</b> : 20/11/2008 <b>S.O. No.</b> :	<b>Drawing Number</b> : D2091REV. A
<b>Prsht Rev.</b> : NC	<b>Project Number</b> : N/A
<b>First Issue</b> : / / <b>Type</b> : LARGE FAB ASSY	<b>Drawing Revision</b> : A
<b>Previous Run</b> : 30137	<b>Material</b> :
<b>Written By</b> :	<b>Due Date</b> : 25/12/2008 <b>Qty:</b> 20 <b>Um:</b> Each
<b>Checked &amp; Approved By</b> : <u>JUD 08.11.21</u>	
<b>Comment</b> : Est: C 99.01.18 Re-format DM	

## Additional Product

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
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1.0	D2000043	Jet
-----	----------	-----



**Comment:** Qty.: 1.0000 Each(s)/Unit Total: 20.0000 Each(s)

Jet

Pick:

Qty	Part Number	Description	Batch
-----	-------------	-------------	-------

1	D2000-043	Jet	B39359
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②  
43734



2.0	D2094	Aspirator
-----	-------	-----------



**Comment:** Qty.: 1.0000 Each(s)/Unit Total: 20.0000 Each(s)

Aspirator

Pick:

Qty	Part Number	Description	Batch
-----	-------------	-------------	-------

1	D2094	Aspirator Body	B30153
---	-------	----------------	--------

9/5/27



3.0	D2095	Aspirator
-----	-------	-----------



**Comment:** Qty.: 1.0000 Each(s)/Unit Total: 20.0000 Each(s)

Aspirator

Pick:

Qty	Part Number	Description	Batch
-----	-------------	-------------	-------

1	D2095	Aspirator Core	B5535
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①  
B30154



4.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
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**Comment:** LARGE FAB RESOURCE 1

Weld D2000-043 Jet to D2094 Aspirator Body as per Dwg D2091 using Jig DT8294



12.09.05.28 20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Thursday, 20/11/2008 3:33:07 PM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: ASPIRATOR

Job Number: 43591

Part Number: D2091

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC9 + QCS

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

QC9 → 8E 09-05-28 (x20)

6.0

OUTSIDE SERV.15

OUTSIDE SERVICES - LF



Comment: Sub-Contracting PURCHASING

Issue P/O: 8891

Black Anodize weldment from step 3 and Dwg D2095

C209/05/29 (x20)

7.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT ANODIZE

Sort 6/6/08 (x20)

8.0

A1449

Grommet



Comment: Qty.: 4.0000 Each(s)/Unit Total: 80.0000 Each(s)

Grommet

Pick:

Qty	Part Number	Description	Batch
4	A1449	Grommet	M1487

9.0

A1622

Grommet



Comment: Qty.: 4.0000 Each(s)/Unit Total: 80.0000 Each(s)

Grommet

Pick:

Qty	Part Number	Description	Batch
4	A1622	Grommet	M1487

C 9/0/08 20

10.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Install grommets as per Dwg D2091

M-L 09/07/07

11.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Sort 6/6/08 (x20)

6.1.

ENSURE CERTIFICATE OF CONFORMITY IS ATTACHED

C 9/6/08 (x20)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



Date: Thursday, 20/11/2008 3:33:07 PM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: ASPIRATOR

Job Number: 43591

Part Number: D2091

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0



PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

13.0



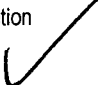
QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

D2092 SHOWN

A1622  
A1449

D2093 ON D2090 (45°)  
D2092 ON D2089 (45°)  
D2094 ON D2091 (90°)

D2000-043  
AS SHOWN ON D2092  
& D2093.  
ROTATED 45° ON  
D2094

RELEASED  
74.11.15

D2096 ON D2090  
D2095 ON D2089 & D2091

#4359

FINISH:

BLACK ANODIZE AFTER WELDING &  
PRIOR TO RIVETING.



A D A 1449 was AS7-	REVISION	THIS DRAWING IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE PERMISSION OF DART AERO.		RIVET CODE SHALL BE PER HAS 623		PART NO.	ITEM	DESCRIPTION	MATERIAL	SPEC./VENOOR
	DRAWN			BASIC CODE	DIA. DASH NO. N=HEAD NEAR SIDE T=HEAD FAR SIDE	CONTRACT NO.		DART AERO ACCESSORIES INC. VANCOUVER CANADA		
	APPROVED			D=HOLE DIGIT=NO OF SHEETS C=COUNTERSINK	LENGTH DASH NO W=SPOTWELD	DRAWN DESIGNED DATE 1992				
	DESCRIPTION OF CHANGE	REQUIREMENTS - UNLESS OTHERWISE SPECIFIED GENERAL 1. DIMENSIONS ARE IN INCHES 2. SURFACE ROUGHNESS 125 3. REMOVE SHARP EDGES .015 MAX 4. THREADS PER INCH - 5 - 3742 5. HOLES PER AND 10287		LIMITS 1. TOLERANCES - JES 8.030 2. ANGLES XXX 8.010 3. PARALLELISM 1.0025 4. ECCENTRICITY .003 MAX 5. SYMMETRY ABOUT ALL HAVE CENTRE LINES 005		BASIC CODES B=MS20470AD BB=MS20478AD		TITLE ASPIRATORS		CODE D2085/90/91
REPORT ALL DISCREPANCIES - DO NOT SCALE										

D2085/90/91

A

# TNM ANODISATION et PEINTURE TNM INC.

21 chemin de l'Aviation, Pointe-Claire, QC H9R 4Z2

Telephone: (514) 429-7777 Fax: (514) 429-5108

Certifié ISO 9001-2000 certified

Certifié NADCAP certified

PACKING  
SLIP

75582

6/4/2009

CLIENT / CUSTOMER:

ART AEROSPACE LTD.

270 ABERDEEN STREET

AWKESBURY, ONTARIO

6A 1K7

NO. DE COMMANDE:

PURCHASE ORDER/

513952/8891

ITEM	COMMANDE ORDERED	QUANTITE SHIPPED	PART NUMBER & DESCRIPTION	
1	20	20	D2091	B43591
2	4	4	D2414	B46836

*Rec. 8891*

PICKED UP BY / RECU: \_\_\_\_\_

En cas de perte ou de dommages dû à la valeur intrinsèque de certaines responsabilités se limitera à deux fois la valeur du traitement des pièces perdues ou endommagées.

Due to the intrinsic value of some parts, we are only liable for loss or damage to twice the invoiced finishing costs.

TNM

# ANODISATION et PEINTURE TNM INC.

C. OF C

21 chemin de l'Aviation, Pointe Claire QC H9R 4Z2

Telephone: (514) 429-7777 Fax: (514) 429-5108

Certifié ISO 9001-2000 certified

approuvé NADCAP approved

75582

6/4/2009



CLIENT / CUSTOMER:

DART AEROSPACE LTD.

270 ABERDEEN STREET

HAWKESBURY, ONTARIO

K6A 1K7

CERTIFICATE OF COMPLIANCE  
CERTIFICAT DE CONFORMITE

NO. DE COMMANDE: 513952/8891  
PURCHASE ORDER/



Conformance  
**Nadcap**  
Chemical Process  
Nondestructive Testing

ITEM	COMMANDE	QUANTITE	DESIGNATION	REFERENCE	REMARKS
1	20	20	D2091	B43591	BLACK ANODIZE PER MIL-A-8625F1 TYPE 1 CLASS 2
2	4	4	D2414	B46836	RED ANODIZE PER MIL-A-8625F1 TYPE 1 CLASS 2

*Solub*

Nous certifions que les pièces énumérées ont été traitées, testées et inspectées selon les spécifications mentionnées.

Les cartes de travail ont été remplies et sont disponibles pour consultation, sur demande.

All parts are processed, tested, and inspected to the requirements of above specifications.

Travel cards have been filled and are available for viewing upon request.

NOTE: Painted Parts will be Fully Solvent Resistant after 7 (seven) Full Days of Air Curing at Ambient

Temperatures"

NOTE: Les pièces peintes seront complètement résistantes au solvant après 7 (sept) jours complets de séchage à l'air ambiant.

Signature/Signed:

*[Signature]*  
Directeur de la Qualité / Q.A. Manager